

I claim:

1. A method for transmitting data packets over a time division multiple access data link when the link is subject to intermittent bursts of interference that are short in duration relative to the duration of a data frame, the method comprising the steps of:  
transmitting data packets within a first assigned time slot on the wireless data

5 link;

detecting the presence of the intermittent bursts of interference;

assigning a second time slot upon which data packets are to be transmitted,

where the second time slot is spaced in time from the first time slot by a duration greater than the typical duration of an interference burst;

transmitting each data packet within the second time slot.

2. A method for transmitting data packets over a time division multiple access data link when the link is subject to periodic bursts of interference that are short in duration relative to the duration of a data frame, the method comprising the steps of:

detecting the presence of the periodic bursts of interference;

5 assigning a first time slot and a second time slot upon which data packets can be transmitted, where the second time slot is spaced in time from the first time slot by a duration greater than the typical duration of an interference burst;

determining when a periodic burst will appear on either the first or the second time slot during each data link frame;

10 selecting either the first or second time slot for transmission of a data packet such that an interference burst does not occur during the selected time slot;

transmitting the data packet on the selected time slot.

3. The method of claim 2, in which the step of detecting the presence of periodic bursts of interference is further comprised of the substeps of  
observing the timing at which packets with errors are received;

determining from the observed timing that received packets with errors are periodically spaced in time.

4. The method of claim 2, in which the data packets are sent from a transmitter to a receiver, the receiver is powered by an AC power source, and the step of detecting the presence of periodic bursts of interference is further comprised of the substeps of:

detecting the timing of the AC power source;

observing the phase of the AC power source at the time a packet with an error is received by the receiver;

receiving subsequent data packets with errors by the receiver when the phase of the AC power source is equal to the observed phase.

5. The method of claim 1, in which the step of detecting the presence of the intermittent bursts of interference is further comprised of the substeps of

selecting either a first threshold value if intermittent bursts of interference have been previously detected, or a second threshold value if intermittent bursts of

interference have not been previously detected;

monitoring the error rate of packets transmitted over the data link;

determining that the error rate has exceeded the selected threshold value.

6. The method of claim 2, in which the data packets are exchanged between a first transceiver and a second transceiver, the step of selecting either the first or second time slot is further comprised of the substep of transmitting from the first transceiver to the

second transceiver an indication as to whether the second transceiver should communicate via the first time slot or the second time slot, and the step of transmitting the data packet on the selected time slot is performed by the second transceiver.

7. A method for transmitting data packets over a time division multiple access data link when the link is subject to bursts of interference that occur periodically with a known period between bursts and are short in duration relative to the duration of a data frame, and where the data packets are transmitted in frames of duration that is a multiple or fraction of the interference burst period, the method comprising the steps of:

detecting the phase of the data frame with respect to the bursts of interference;  
synchronizing the data frame phase to the interference bursts, such that the interference bursts occur during a predetermined time slot in the data frame;

transmitting data packets during one or more time slots other than the slot during

10 which the interference bursts occur.